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COVID-19, Working from Home and the Potential Reverse Brain Drain

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The COVID-19 pandemic has led to a substantial increase in the prevalence of working from home among white-collar occupations. This can have important implications for the future of the workplace and quality of life. We discuss an additional implication, which we label reverse brain drain: the possibility that white-collar migrant workers return to live in their countries of origin while continuing to work for employers in their countries of destination. We estimate the potential size of this reverse flow using data from the European Labor Force Survey. Our estimates suggest that the UK, France, Switzerland and Germany each have around half a million skilled migrants who could perform their jobs from their home countries. Most of them originate from the other EU member states: both old and new. We discuss the potential economic, social and political implications of such reverse brain drain.

Keywords: Covid-19; working from home; return migration; brain drain.

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Introduction

The COVID-19 pandemic has forced entrepreneurs and workers around the world to rapidly adopt new communication and organizational technologies and tools that allow them to exercise their professional activities safely from their homes rather than from their employers' offices. The stigma of working from home (WFH henceforth) has also considerably diminished, as survey data from the UK show (Taneja et al., 2021). This may lead to systemic and lasting changes in the culture of working. Survey data from the US suggest that more than one-third of firms that had employees switch to remote work believe that remote work will remain even after the COVID-19 crisis ends (Bartik at al., 2020). For some occupations WFH may become the new normal and physical presence at the workplace may be reduced to a bare minimum; others will adopt a hybrid model combining working from the office with WFH (Barrero, Bloom & Davis, 2020; McKinsey, 2020; Financial Times, 2021). The work commute may thus transform from a daily occurrence to something that takes places a few times per week or month or even less often. As a consequence, many workers will choose to live in locations further away from the office. Some workers will leave the expensive, polluted and crowded urban areas for the countryside. Others may even decide to move to a different country. Indeed, the human, technical and organizational investments that facilitate teleworking domestically also facilitate teleworking internationally (Baldwin, 2020). The group most likely to do so are skilled white-collar migrants who have moved to another country for professional reasons, but who would prefer living in their countries of origin for family, social and lifestyle reasons. The aim of this paper is to provide estimates of the potential magnitude of this new form of transnationalism,[1] and identify the countries and regions most likely to be affected by it: both as sources of reverse brain drain and the likely beneficiaries.

We estimate the potential size of this *reverse brain drain* by, first, computing how many white-collar migrant workers there are in the various European countries. To this effect, we capture the pre-pandemic situation by using the 2016 wave of the European Labor Force Survey (EULFS). Then, we estimate how many of these migrant workers could potentially work from home after the pandemic. We work with two scenarios. The first one is based on assuming that WFH throughout Europe will become as common as in

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[1] For clear explanations on the concept of migrant transnationalism, including definitions, measurement issues and academic debates around it, see Portes (2001).

the three countries with highest WFH shares in the 2016 EULFS (Denmark, the Netherlands and Sweden). The second scenario instead relies on estimates of post-pandemic feasibility of WFH by Dingel and Neiman (2020). Considering only migrants from Europe or the European periphery, our estimates suggest a potential reverse drain of up to 3 million white-collar workers. Most of these potential reverse-brainers work in the UK, France, Switzerland and Germany. Contrary to expectations, most are from the EU15 countries, not from the new member states, non-EU countries in Europe or the MENA countries.

This paper contributes to the discussions on the consequences of COVID-19. Some of these are well-known and already well-understood: the dramatic loss of human lives, contraction of economic activity, decline in social interactions. There are also more subtle effects: changes in the demand for office space (Financial Times, 2021), an exacerbation of inequalities between skilled and unskilled workers (Adam-Prassel et al., 2020), and reallocations of labor between countries as companies offshore more tasks to workers in lower wage countries (Baldwin, 2020). In this paper, we highlight the possibility of reallocation of residential choices between countries as skilled migrants return to their countries of origin while continuing to telework for the companies or institutions located in other counties.

Data and methodology

We use data from the 2016 wave of the European Labor Force survey (henceforth EULFS), covering all EU countries, the UK and the EFTA. The survey contains information on the region of origin and nationality of respondents, which we use to identify migrants. We focus on intra-EU migrants, migrants from EFTA countries, and migrants originating from countries in the EU's geographical neighborhood: Middle East and North Africa (MENA). We only consider these regions of origin because we expect that for most jobs, WFH will still require physical presence at the office from time to time. Migrants from further afield would be less able to comply with the expectation of regular return to the office, and/or such occasional commuting to work would be too costly. We exclude from our analysis destination countries with fewer than 35 000 respondents in the EULFS and we exclude regions of origin with fewer

than 100 white-collar migrants per destination country in the EULFS to ensure that the resulting figures are sufficiently representative.

We identify occupations that can be done from home as follows. The EULFS identifies the occupation and sector of each employed or self-employed person: it distinguishes 10 occupations[2] and 21 sectors (following the NACE 1-digit classification). WFH regularly is mainly possible for white-collar occupations (Bick, Blandin & Mertens, 2020). Therefore, we only consider respondents in the following four categories: Managers, Professionals, Technicians and associate professionals, and Clerical support workers. However, even within these occupations, there may be significant differences in the prevalence of WFH across sectors. We therefore estimate occupation and sector specific rates of working from home. With 4 occupations and 21 sectors, we are left with 84 occupation-sector groups. For these, we formulate two scenarios.

For Scenario 1, we rely on the question in the EULFS about how often the respondents worked from home. We calculate, for the entire sample (including both migrants and natives), the share of workers who work from home either sometimes or often, for each country, occupation and sector in 2016. There are significant differences in the prevalence of WFH across European countries, even for the same occupations. We believe these are mainly driven by social and cultural customs and informal institutions (Felstead et al., 2003; Gottlieb et al., 2020). The experience of the pandemic can potentially transform the prevalence of WFH. We consider the three countries with the highest prevalence of WFH prior to the Covid-19 pandemic – Denmark, the Netherlands and Sweden – as an indication of the potential extent of WFH in the post-pandemic reality. The average shares of respondents working from home for each of these occupations for the top 3 countries (Denmark, the Netherlands and Sweden), constituting our benchmark, can be found in the Appendix.

For Scenario 2, we instead rely on the expected prevalence rates of WFH estimated by Dingel & Neiman (2020). These authors evaluate the feasibility of working from home for different sectors and occupations, reflecting the nature of each type of work. Recent survey evidence from the US suggests that the Dingel and Neiman (2020) estimates of suitability for remote work do a remarkably good job of predicting the industry level

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[2] Managers, Professionals, Technicians and associate professionals, Clerical support workers, Service and sales workers, Skilled agricultural, forestry and fishery workers, Craft and related trades workers, Plant and machine operators and assemblers, Elementary occupations, and Armed forces occupations.

patterns of WFH (Bartik et al., 2020). We match the Dingel & Neiman sectors/occupations with those used in the EULFS, to get an alternative estimate of the likelihood of working from home in the post-pandemic period. The resulting figures are also reported in the Appendix.

In both scenarios, the share of workers who can perform their job from home is occupation-sector specific, but not country-specific: this is equivalent to assuming that in the post-pandemic period, there will not be substantial differences in WFH across countries. Estimates by Boeri et al. (2020) support this assumption: they find that the share of jobs that could be done from home, taking all sectors together, when no-contact restrictions are relaxed, is very similar for Italy, France, Germany, Sweden and the UK (between 46% and 49%). It seems then plausible to assume that these shares will be similar between European countries for narrowly defined occupation-sector groups.

Next, we calculate the share of white-collar migrants for each occupation-sector group, country of residence, and region of origin in the EULFS.[3] A respondent is considered to be a migrant if they were born in a different country than their country of residence at the moment of the survey. If information on the country of birth is not available, we use the respondents' nationality: a respondent is a migrant if they hold a different nationality than the one of their country of residence. Table 1 reports the resulting shares of white-collar migrants in the labor forces, by country of residence and region of origin. Switzerland is the country where this share is the highest: one sixth of the labor force are migrants in white-collar occupations. The white-collar migrant share is higher than 5 percent also in Austria, Belgium, Ireland and Sweden. In contrast, Eastern and Southern European member states feature low shares of white-collar migrants: Hungary, Greece, Poland and Spain all have less than 1 percent of their labor force as migrants in white-collar occupations that could be conducted from home. This is not necessarily because these countries have not had many immigrants. Rather, most of their immigrants are in blue-collar occupations. Similarly, most white-collar migrants come from EU 15 countries; the migrants from the NMS are more likely to be in blue-collar occupations.

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[3] The EULFS does not report the countries of origin of migrants only broad geographical regions: EU15, NMS10, NMS3, NMS13, EU28, EFTA, Other Europe, Europe Outside EU28, North Africa, Other Africa, Middle East, East Asia, South S-East Asia, North Africa and Middle East, East and South Asia, North America, Central America, South America, Australia Oceania, Latin America, and North America and AUS.

Table 1 Share of migrants in the labor force of their residence countries, per region of origin.

	EU15	NSM10	NSM3	EFTA	Other Europe	MENA	Total
Austria	0.025	0.009	0.009	0.001	0.012	0.002	**0.057**
Belgium	0.042	0.004	0.003		0.006	0.007	**0.062**
Denmark	0.012	0.003		0.004	0.005	0.003	**0.027**
France	0.011	0.001	0.001		0.003	0.014	**0.030**
Germany	0.008	0.004	0.002	0.000	0.005	0.001	**0.022**
Greece	0.003				0.004	0.002	**0.008**
Hungary			0.004		0.002		**0.005**
Ireland	0.040	0.014	0.003		0.003		**0.060**
Italy	0.006	0.001	0.002	0.003	0.003	0.001	**0.016**
Netherlands	0.010				0.004		**0.014**
Poland					0.001		**0.001**
Portugal	0.012						**0.012**
Spain	0.007						**0.007**
Sweden	0.018	0.007*		0.003	0.010		**0.050**
Switzerland	0.134	0.007	0.004		0.015	0.003	**0.166**
UK	0.018	0.008	0.003		0.003		**0.032**

Notes: Only countries with at least 35,000 respondents belonging to the labor force in the EULFS are included. Only migrants working as Managers, Professionals, Technicians and associate professionals, and Clerical support workers are included. Empty cell means that less than 100 white-collar migrants per destination country and region of origin were reported in the EULFS and therefore a reliable estimate of the number of potential migrants cannot be computed. * The figures for Sweden for NMS10 also include the figures for NMS3. ** The figures for Sweden for North Africa also include the figures for Middle East.

By multiplying the share of migrants with the potential WFH share (for the two scenarios discussed above), we obtain the shares of migrants who could work from home. Finally, we multiply the shares of potential return migrants by the size of the labor force of each country to estimate the numbers of potential return migrants per occupation, sector, and region of origin. This way, we obtain two sets of estimated numbers of white-collar migrants who could work from home for the two scenarios considered.

To sum up, the potential return migration from country i to region j (rm_{ij}) is estimated using the formula:

$$rm_{ij} = lf_i \cdot \sum_k \frac{migr_{ijk}^{EULFS}}{lf_i^{EULFS}} wfh_k,$$

where lf_i is the total labor force of country i, $migr_{ijk}^{EULFS}$ is the number of migrants in the EULFS sample originating from region j and working in country i in occupation-sector group k, lf_i^{EULFS} is the size of labor force in the EUFLS sample for country i,

and wfh_k is the share of workers who can perform their job from home in occupation-sector group k.

The resulting estimates should be seen as the upper bound for the potential size of reverse brain drain. Many migrants who could technically return because their job can be performed from home will choose to remain in their destination countries. Empirical evidence shows that migration decisions are not only driven by economic considerations, but also by social, institutional and cultural motives. Some migrants will choose to remain in their countries of residence in order to benefit from better public services and infrastructure, or because they have built new lives in their countries of residence and have little connection with, and desire to return to, their countries of origin.

Results

The estimates for the two scenarios are reported in Table 2 and represented visually in Figures 1 and 2. The two scenarios are of similar orders of magnitude: this is not surprising, as they are based on the same shares of white-collar migrants reported in Table 1. Scenario 1 yields lower estimates of the potential numbers of white-collar migrants who could work from home than Scenario 2. This suggests that even in the three European countries with the highest propensity to work from home, the extent of remote working in 2016 was below what is practically feasible today.

Our estimates suggest that there is indeed a substantial potential for a reverse brain drain: the UK, France, Switzerland and Germany all have more than 500 thousand white-collar immigrant workers who could become reverse brain drainers. The main likely beneficiaries of these return flows are the other EU member states. The old member states (EU15) could receive a reverse brain drain of 1.5 million (Scenario 1) to 2 million (Scenario 2). The new member states that joined the EU in 2004, 2007 and 2013 could potentially receive half a million reverse brain drainers. The much higher number for the old member states reflects both the relatively large size of this geographical area, and the higher share of white-collar work among EU15 migrants than among those from the NMS. The other European (non-EU) and MENA countries can also gain significant numbers of white-collar return migrants. Altogether, the EU

counts around three million migrants in white collar occupations who could potentially return to their home countries and telework for their destination country.

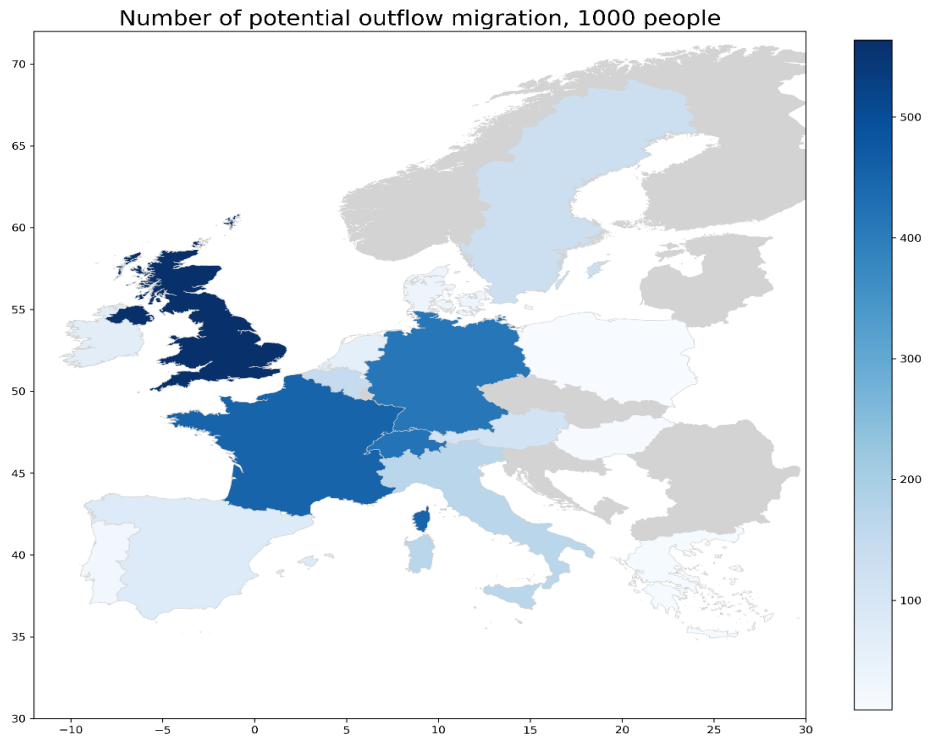**Figure 1: Estimates of outflows per country of migrants' current residence**

Number of potential outflow migration, 1000 people

Figure 2: Estimates of inflows per region of migrants' origin

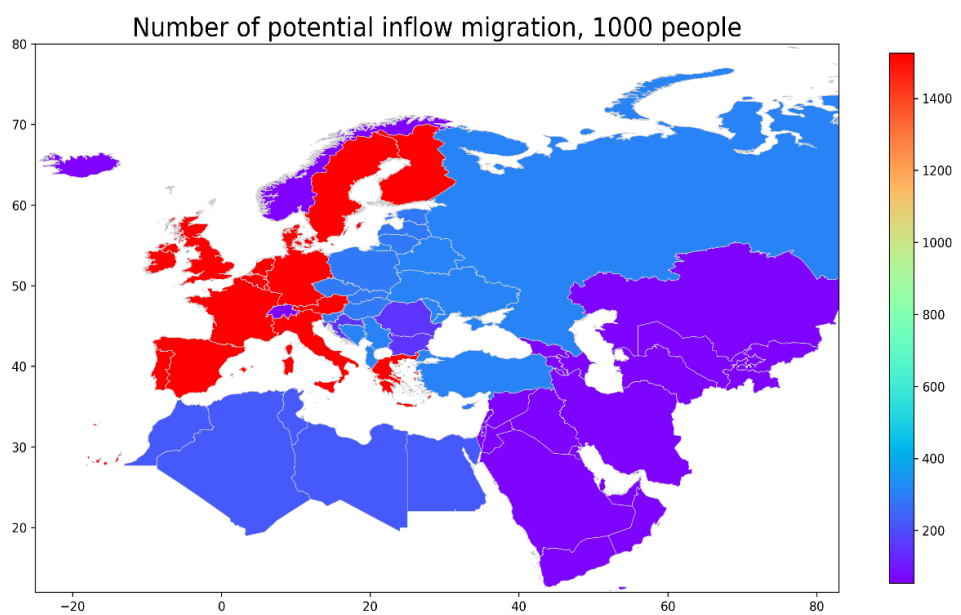Number of potential inflow migration, 1000 people

Table 2 Estimates of potential return migrants per country of residence and region of origin: Methods 1 and 2 (in thousands)

Region of origin	EU15		NMS		Other Europe		MENA		All	
Country of residence	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2	Scenario 1	Scenario 2	**Scenario 1**	**Scenario 2**
Austria	56.71	75.01	26.85	38.5	26.26	36.98	3.68	5.03	**113.5**	**155.52**
Belgium	102.57	120.49	18.01	17.85	12.94	16.76	15.93	21.81	**149.45**	**176.91**
Denmark	18.61	25.29	3.64	5.44	12.51	17.83	4.22	6.17	**38.98**	**54.73**
France	170.26	224.19	29.67	40.5	40.54	54.08	210.61	291.59	**451.08**	**610.36**
Germany	177.1	233.21	103.63	155.54	106.31	154.92	22.98	32.43	**410.02**	**576.1**
Greece	6.7	9.42			5.86	9.93	3.09	4.88	**15.65**	**24.23**
Hungary			7.8	10.82	4.25	5.89			**12.05**	**16.71**
Ireland	47.78	63.58	18.54	24.27	3.08	3.89			**69.4**	**91.74**
Italy	67.36	95.44	31.81	51.4	58.97	87.51	11.52	16.51	**169.66**	**250.86**
Netherlands	44.86	62.56			14.81	21.52			**59.67**	**84.08**
Poland					9.41	11.43			**9.41**	**11.43**
Portugal	28.5	38.95							**28.5**	**38.95**
Spain	81.15	109.32							**81.15**	**109.32**
Sweden	48.68	66.31	16.98	24.44	31.91	45.94	34.12	49.03	**131.69**	**185.72**
Switzerland	342.91	444.17	28.04	37.13	33.8	45.79	14.73	18.94	**419.48**	**546.03**
United Kingdom	332.93	430.99	178.4	237.98	52.31	65.29			**563.64**	**734.26**
Total	1526,09	1998,93	463,37	643,88	412,95	577,75	320,89	446,40	**2723**	**3667**

Notes: Only countries with at least 35.000 respondents belonging to the labor force in the EULFS are included. Empty cell means that less than 100 white-collar migrants per destination country and region of origin reported in the EULFS and therefore a reliable estimate of the number of potential migrants cannot be computed. Scenario 1 is based on working from home in 2016 (pre-pandemic) in the three EU countries with the highest prevalence of WFH: Denmark, Netherlands, and Sweden. Scenario 2 used the post-pandemic WFH prevalence rates estimated by Dingel & Neiman (2020).

Conclusion

Lockdown restrictions and safety concerns during the Covid-19 pandemic have compelled large numbers of workers around the world to work primarily or exclusively from home. This was especially the case with white-collar workers whose work can be exercised from a home office relatively easily. Even after the epidemiological reasons diminish, many firms are likely to continue to facilitate and even encourage working from home. The pandemic has thus started a process of unprecedented relocation of work-force from the employers' offices to the workers' homes (McKinsey, 2020), from city centers to suburbs and rural locations (van Leeuwen & Bourdeau-Lepage, 2020), and in many cases to other countries. In this study, we assess the potential implications of this process for a new form of transnationalism: migrant white-collar workers returning to live in their countries of origin while continuing to telework for their employer abroad. While digitals nomads were around even before the pandemic, they accounted for a very marginal part of the work force. During the post-pandemic reality, international teleworkers can enter the mainstream.

We construct estimates of the share of white-collar workers who could work from home for each occupation and sector. According to our estimates, countries of residence which are most likely to be affected by the departures of skilled migrants are the UK, France, Switzerland and Germany: in each of these countries, around half a million migrants originating from the EU or European-neighborhood countries could potentially perform their activities from home. The countries most likely to receive return migrants are the EU 15, where up to 2 million skilled migrants could potentially return, and the new EU member states, with up to half a million skilled potential return migrants. Other European and MENA countries may expect the return of several hundreds of thousand migrants.

For decades, developed countries have benefited from inflows of highly-skilled workers from the less development countries in Central, Eastern and Southern Europe or from the European periphery. Indeed, brain drain may have been one of the reasons why such countries often end up in the so-called middle-income trap: with the convergence process stalling after they have achieved an intermediate level of per capita income. The greater prevalence of WFH spurred by the Covid-19 pandemic could help reverse this brain drain, if some migrant workers relocate internationally while working from home. Our estimates gauge the potential size of such a reverse brain drain of white-

collar workers to their home countries or other countries. If it occurs, it will have a number of potentially important implications. First of all, by allowing the migrants to live closer to their friends and families, such return migration will raise the migrants' and their loved ones' wellbeing (Crosbie & Moore, 2004; van Leeuwen & Bourdeau-Lepage, 2020). Physical separation between family members is an important cost of migration; working from home will allow the migrants to continue enjoying the professional and economic benefits of being employed in the destination country without having to leave their home country. Second, even though these workers will continue working for employers in the destination countries, while being in their home countries they can also participate in professional networks, engage in political activism and various undertakings there too. Therefore, their home countries have a chance to benefit, even if only partially, from the human capitals of these migrants, as well as from their professional networks in the destination countries. Their presence and the positive effects of their human capital can have important developmental implications. Third, migrants returning from developed and politically and socially liberal countries can exert a positive influence on their home countries through transfers of modern political views and social norms: this process is often referred to as social/cultural remittances. Such favorable effects are likely to be reinforced further if the migrants are physically present in their home countries. Finally, return migrants would continue earning their income in the destination country but a large part of their consumption would be in the home country. Therefore, their return will translate into higher consumption and perhaps also investment in the home country. The home countries of these migrants could implement policies incentivizing the return of their bright teleworkers, in order to benefit from their consumption and investment, political participation, cultural remittances and professional networks.

References

Adam-Prassel, A., Boneva, T., Golin, M., Rauh, C. (2020). Inequality in the impact of the coronavirus shock: Evidence from real time surveys. *Journal of Public Economics* 189, 104245.

Baldwin, R (2020), "COVID, hysteresis, and the future of work", VoxEU.org, 29 May.

Barrero. J. M.. Bloom. N.. & Davis. S. J. (2021). Why Working From Home Will Stick. University of Chicago. NBER Working Paper 28731.

Bartik, A W, Z B Cullen, E L Glaeser, M Luca and C T Stanton (2020), "What Jobs are Being Done at Home During the COVID-19 Crisis? Evidence from Firm-Level Surveys", NBER Working Paper 27422.

Bick, A., Blandin, A., & Mertens, K. (2020). Work from home after the COVID-19 Outbreak, CEPR Discussion Paper No. DP15000.

Boeri, T, A Caiumi, and M Paccagnella (2020), "Mitigating the work-security trade-off while rebooting the economy", VoxEU.org, 9 April.

Crosbie, T., & Moore, J. (2004). Work-life balance and working from home. *Social Policy and Society*, 3(3), 223.

Dingel. J. I.. & Neiman. B. (2020). How many jobs can be done at home? *Journal of Public Economics*. 189. 104235.

Felstead, A., Jewson, N., & Walters, S. (2003). Managerial control of employees working at home. *British journal of industrial relations*, 41(2), 241-264.

Financial Times (2021), "Employers aim for hybrid working after Covid-19 pandemic", 28 February.

Financial Times (2021), "UK businesses think big about smaller office spaces", 4 March.

Gottlieb, C., Grobovsek, J., & Poschke, M. (2020). Working from home across countries. Covid Economics.

McKinsey (2020). What's next for remote work: An analysis of 2000 tasks, 800 jobs and nine countries [https://www.mckinsey.com/featured-insights/future-of-work/whats-next-for-remote-work-an-analysis-of-2000-tasks-800-jobs-and-nine-countries].

Portes, A. (2001). Introduction: The debates and significance of immigrant transnationalism. *Global Networks* 1(3), 181-194.

Taneja, S., Mizen, P. and Bloom, N. (2021). Working from home is revolutionizing the UK labor market. Voxeu.org, 15 March.

van Leeuwen. E.. & Bourdeau-Lepage. L. (2020). Spatial differences and the impact of the lockdown on well-being in the Netherlands. Available at SSRN 3597707.

Appendix

Table A1: Share of workers who can work for home by occupation-sector group

	Method 1: Average Denmark, the Netherlands and Sweden				Method 2: Following Dingel & Neiman (2020)			
	Managers	Professionals	Technicians and associate professionals	Clerical support workers	Managers	Professionals	Technicians and associate professionals	Clerical support workers
Agriculture, forestry and fishing	0,46	0,67	0,46	0,53	0,48	0,48	0,45	0,37
Mining and quarrying	0,52	0,60	0,25	0,40	0,56	0,57	0,54	0,45
Manufacturing	0,67	0,57	0,35	0,19	0,55	0,55	0,52	0,44
Electricity, gas, steam and air conditioning supply	0,86	0,73	0,47	0,37	0,62	0,63	0,60	0,51
Water supply; sewerage, waste management and remediation activities	0,74	0,48	0,39	0,20	0,62	0,44	0,41	0,33
Construction	0,61	0,62	0,44	0,32	0,53	0,54	0,51	0,42
Wholesale and retail trade; repair of motor vehicles and motorcycles	0,61	0,60	0,44	0,19	0,60	0,61	0,58	0,49
Transportation and storage	0,72	0,61	0,35	0,16	0,53	0,54	0,51	0,42
Accommodation and food service activities	0,54	0,57	0,39	0,19	0,46	0,46	0,43	0,35
Information and communication	0,82	0,70	0,61	0,39	0,87	0,88	0,83	0,65
Financial and insurance activities	0,75	0,65	0,39	0,27	0,87	0,88	0,83	0,65
Real estate activities	0,72	0,61	0,60	0,33	0,87	0,88	0,83	0,65
Professional, scientific and technical activities	0,82	0,71	0,53	0,38	0,87	0,88	0,83	0,65
Administrative and support service activities	0,67	0,49	0,40	0,24	0,87	0,88	0,83	0,65
Public administration and defence; compulsory social security	0,77	0,62	0,40	0,21	0,87	0,88	0,83	0,65
Education	0,79	0,67	0,44	0,25	0,87	0,88	0,83	0,65
Human health and social work activities	0,66	0,32	0,19	0,17	0,56	0,57	0,54	0,45
Arts, entertainment and recreation	0,67	0,67	0,36	0,19	0,59	0,59	0,56	0,48
Other service activities	0,74	0,73	0,47	0,33	0,59	0,60	0,57	0,48